Projects

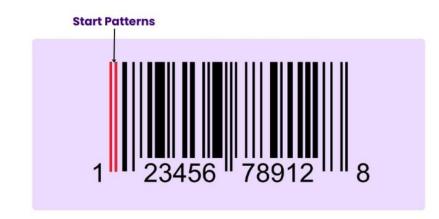
The Project

- ☐ Students can work in groups on the project
- Maximum two students can join one group
- ☐ Project grade is 40%
- Groups have to be formed within one week. Please send me the team members and the project title by 31.12.2024
- ☐ Final submission of the project includes:
 - Report of the test cases and the achieved results
 - ☐ Project code with documentation
 - Presentation video
- □ Deadline: 31.01.2025
- In case the student could not submit the project, then he/she has to pass the final exam

1- Bar-Code Detection and Decoding

The idea behind this project is simple. One must make a computer locate that area in an image with maximum contours. You will first need to convert the image into grayscale to get started. After that, use image processing methods like gradient calculation, blur image, binary thresholding, morphology, etc., and finally find the area with the highest number of contours. Then, label the area as a barcode. Additionally, you can decode the barcode to identify the number represented by this barcode.

You might need to pre-process the image to adjust the orientation and enhance the image quality.



2 - Questionnaire Analysis

In this project you can design the questionnaire template, print some samples, fill them manually with pen, scan and save them in your computer.

Implement a software to load the scanned papers, detect the answer for each question by detecting the marked option. At the end the software will output the id for each question and the chosen answer automatically.

You might need to pre-process the image to adjust the orientation and enhance the image quality.

Please rate each metric

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Education will help me to get a good job in future	0	0	0	0	0
I need to work very hard to go to a national school	0	0	0	0	0
My parents encourage me to work hard in my studies	0	0	0	0	0
My father and mother live harmoniously	0	0	0	0	0
My parents are able to pay for my further education	0	0	0	0	0
My parents attend all meetings whenever they are called by the school	0	0	0	0	0
The community around supports building of classrooms, library, toilets etc	0	0	0	0	0
Our teachers encourage us to work hard	0	0	0	0	0
Our teachers are never absent without a good reason	0	0	0	0	0
Our teachers always make sure we understand the lesson	0	0	0	0	0

How far is your home from school?
Less than 1km
About 1 - 2 kms away
About 3 - 4 kms away
5 or more kms away
How often do you come late to school?
I never come late
About once a week
More than once a week
Almost everyday
How often are you absent from school?
Never
About once a week
More than once a week
Almost everyday
Do you find time to do your studies at home?
I don't have any time
Only about 1 to 2 hours
More than 3 hours